DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: SILVER LAKE RESE	RVOIR	Lake Area (ha):	1.38
Town: WARNER		Maximum depth (m):	3.3
County: Merrimack		Mean depth (m):	1.7
River Basin: Merrimack		Volume (m³):	24000
Latitude: 43°16'18"	N	Relative depth:	2.5
Longitude: 71°50'05"	W	Shore configuration:	1.68
Elevation (ft):	625	Areal water load (m/yr):	177.5
Shore length (m):	700	Flushing rate (yr^{-1}) :	102.0
Watershed area (ha):	507.6	P retention coeff.:	0.11
<pre>% watershed ponded:</pre>	0.0	Lake type:	

BIOLOGICAL:	11 January 1995	9 August 1994
DOM. PHYTOPLANKTON (% TOTAL) #	1 NO PHYTOPLANKTON	CHRYSOSPHAERELLA 50%
#	2 SAMPLES COLLECTED	DINOBRYON 15%
#	3	
PHYTOPLANKTON ABUNDANCE (units/mL)	
CHLOROPHYLL-A (µg/L)		0.55
DOM. ZOOPLANKTON (% TOTAL) #	1 NO ZOOPLANKTON	KERATELLA 38%
#	2 SAMPLES COLLECTED	CYCLOPOID COPEPOD 25%
#	3	NAUPLIUS LARVA 21%
ROTIFERS/LITER		588
MICROCRUSTACEA/LITER		506
ZOOPLANKTON ABUNDANCE (#/L)		1110
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		2.5
BOTTOM DISSOLVED OXYGEN (mg/L)	15.0	4.4
BACTERIA (E. coli, #/100 ml) #	1	1
#	2	< 1
#	3	

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL:			SILVER LA	AKE RESE	RVOIR
	11 Janua	ary 1995	9 1	August 19	94
DEPTH (m)	1.0		1.5		
pH (units)	6.4		6.9		
A.N.C. (Alkalinity)	3.6		7.4		
NITRATE NITROGEN	0.07		0.05		
TOTAL KJELDAHL NITROGEN	0.22		0.31		
TOTAL PHOSPHORUS	0.006		0.016		
CONDUCTIVITY (µmhos/cm)	39.4		43.4		
APPARENT COLOR (cpu)	15		48		
MAGNESIUM			0.54		
CALCIUM			3.1		
SODIUM			3.6		
POTASSIUM		10021	0.50		
CHLORIDE	5		6		
SULFATE	5		3		
TN : TP	48		23		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

CALCITE SATURATION INDEX

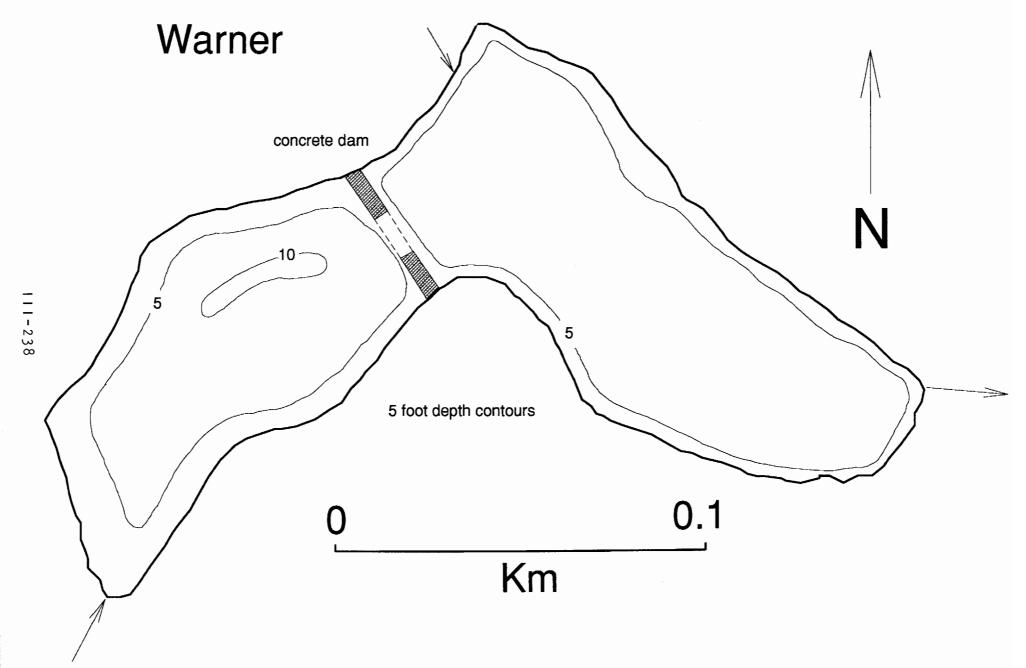
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	3	0	6	Meso.

3.0

COMMENTS:

1. This is the former water supply for the Town of Warner. A town beach was established on the pond in 1995. Although small and shallow (not ideal for a public beach) the pond has a high flushing rate which allows the pond to maintain low algal and bacteria levels.

Silver Lake Reservoir



FIELD DATA SHEET

LAKE: SILVER LAKE RESERVOIR TOWN: WARNER

DATE: 08/09/94 WEATHER: SUNNY & HOT

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	22.1	7.9	89 %
1.0	21.5	7.9	87 %
2.0	21.3	7.6	84 %
2.5	21.0	4.4	49 %
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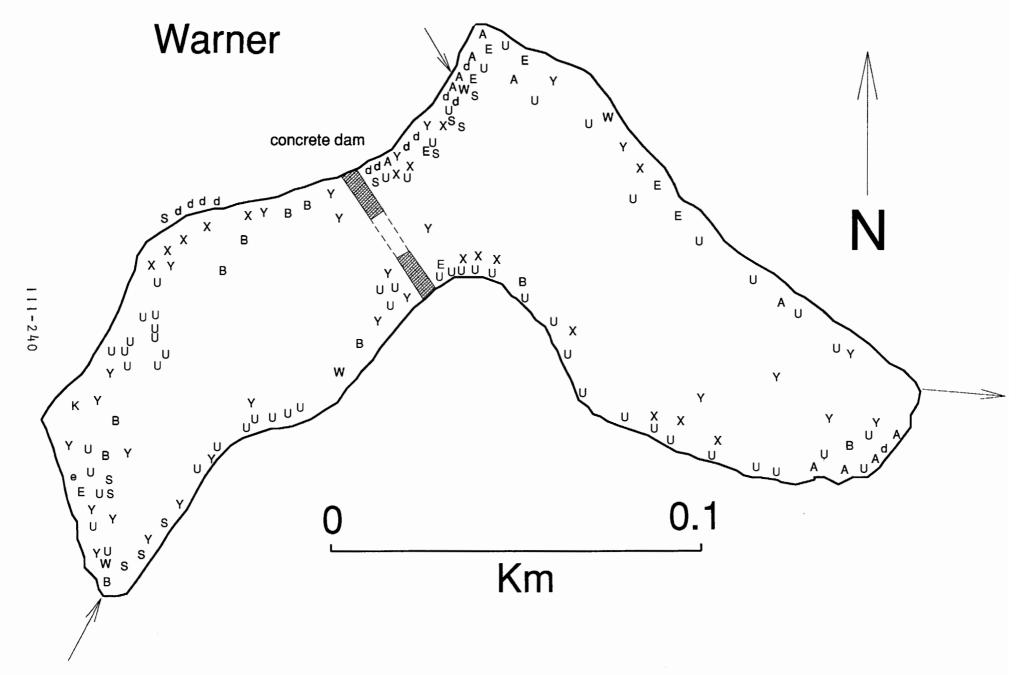
SECCHI DISK (m): 2.5 COMMENTS:

BOTTOM DEPTH (m): 2.7

TIME:

*Dissolved oxygen values are in mg/L

Silver Lake Reservoir



AQUATIC PLANT SURVEY

LAKE: SILVER LAKE RESERVOIR TOWN: WARNER DATE: 08/09/94 PLANT NAME ABUNDANCE Key GENERIC COMMON Y Yellow water lily Scattered Nuphar U Utricularia Bladderwort Common Arrowhead A Sagittaria Sparse E Eriocaulon septangulare Pipewort Scattered Sterile thread-like leaf Common W Potamogeton Pondweed Sparse S Sparganium Bur reed Sparse d Dulichium arundinaceum Three-way sedge Sparse В Brasenia schreberi Water shield Sparse k Unknown plant Sparse е Eleocharis Spike rush Sparse

GENERAL OBSERVATIONS:

1. Tea-colored water limited visibility; bladderwort and sterile thread-like leaves were probably over most of the pond bottom -- more abundant than depicted on the map.

OVERALL ABUNDANCE: Common